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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,472	09/22/2003	Walter Beck	10191/3280	2949
26646	7590	11/09/2004	EXAMINER	
KENYON & KENYON ONE BROADWAY NEW YORK, NY 10004			CLEVELAND, MICHAEL B	
			ART UNIT	PAPER NUMBER

1762

DATE MAILED: 11/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/668,472	Applicant(s) BECK ET AL.	
	Examiner Michael Cleveland	Art Unit 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/22/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-8 in the reply filed on 8/19/2004 is acknowledged.
2. Claims 9-10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 8/19/2004.

Information Disclosure Statement

3. The information disclosure statement filed 9/22/2003 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 4-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The ranges of claims 4-5 are unclear because the basis of the weight percentage is not specified. Based on the specification, the term has been treated as inclusive of the possibility that the concentrations refer to the weight of palladium in a palladium-silver alloy.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-3 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choudhary et al. (U.S. Patent 6,448,199, hereafter '199) in view of Adelman (U.S. Patent 4,002,595, hereafter '595).

'199 teaches a method of producing a conductive coating on an insulating substrate (alumina, a ceramic) (col. 9, lines 60-65), comprising alternating electroless plating of silver coatings and palladium coatings on selected regions at least one surface of the electrically insulating substrate; and firing the substrate (col. 11, line 66-col. 12 line 14). Electroless plating of each individual layer is a growth process and therefore involves a first, seeding stage, followed by the remaining electroless plating.

'199 does not explicitly teach that a metal surface is cleaned before a subsequent electroless deposition step before firing. However, the examiner takes Official Notice that it is extremely well known to rinse coated substrates between electroless coating procedures in order to avoid contaminating the baths. See, e.g., '595, col. 1, lines 31-53. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have rinsed (i.e., cleaned) the surface after depositing a silver layer to avoid contaminating the subsequent palladium electroless plating bath.

Claim 5: The coating may be 74% Pd (col. 12, lines 15-19).

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9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Choudhary '199 in view of Adelman '595 as applied to claim 1 above, and further in view of Behr et al. (U.S. Patent 4,496,373, hereafter '373).

'199 and '595 are discussed above and discuss the formation of hydrogen gas separation membranes, but do not explicitly teach that the concentration of palladium is between 0.1 and 50%. However, '373 teaches that such alloys may be 60 silver (i.e., 40% Pd) (col. 1, lines 15-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed a Pd-Ag alloy with a Pd concentration of about 40% with a reasonable expectation of success because '373 teaches that such concentrations are suitable for hydrogen separation.

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Choudhary '199 in view of Adelman '595 as applied to claim 1 above, and further in view of Roa et al. (U.S. Patent 2003/0190486, hereafter '486).

'199 and '595 are discussed above and discuss the formation of hydrogen gas separation membranes, but do not explicitly teach that the concentration of palladium is between 0.1 and 50%. However, '373 teaches that such alloys may be 60 silver (i.e., 40% Pd) (col. 1, lines 15-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed a Pd-Ag alloy with a Pd concentration of about 40% with a reasonable expectation of success because '373 teaches that such concentrations are suitable for hydrogen separation. The selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). See MPEP 2144.07. Furthermore, "Differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical." (MPEP 2144.05.II.A.)


11. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choudhary '199 in view of Adelman '595 as applied to claim 1 above, and further in view of Roa et al. (U.S. Patent 2003/0190486, hereafter '486).

'199 and '595 are discussed above and discuss the diffusion of silver and palladium but do not explicitly teach that firing temperature is 850 °C. However, '486 teaches that 800-1300 °C are operative temperatures for diffusing silver and palladium. The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a *prima facie* case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549. Furthermore, "Differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical." (MPEP 2144.05.II.A.)

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cleveland whose telephone number is (571) 272-1418. The examiner can normally be reached on Monday-Thursday, 7-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Michael Cleveland
Primary Examiner
Art Unit 1762

11/4/2004